

image

DT20 Rec'd PCT/PTO 15 JUL 2005

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Jürgen MARKL, et al.)	Group Art Unit:
)	Not Yet Assigned
)	
Serial No:	10/049,988)	Examiner:
)	Not Yet Assigned
Filed:	August 21, 2000)	
)	Attorney Docket No:
)	GKS-102.0 (7911/86349)
For:	NUCLEIC ACID MOLECULE COMPRISING)	
	A NUCLEIC ACID SEQUENCE WHICH)	Confirmation No.:
	CODES FOR A HAEMOCYANIN AND)	2621
	COMPRISING AT LEAST ONE INTRON)	
	SEQUENCE)	

INFORMATION DISCLOSURE STATEMENT

MAIL STOP PCT
Commissioner For Patents
P.O. Box 1450
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Sir:

Pursuant to 37 C.F.R. §1.97, a list of documents that may be material to the examination of this application is provided on the attached Form PTO-SB08. Listed Documents A1-A24 are U.S. or foreign patents or pertinent articles that may be relevant to the examination of the present application. The publications listed thereupon generally relate to subject matter of the invention, but do not fairly teach or suggest the claimed Nucleic Acid Molecule Comprising a Nucleic Acid Sequence Coding for a Hemocyanin. Copies of the listed publications are enclosed for consideration by the Examiner.

Serial No: 10/049,988
Jürgen MARKL, et al.

(GKS 102.0)
7911/86349

Listed Documents A1-A2 and A4-A8 and A10-A24 were listed on the International Search Report by the International Searching Authority in the parent case, International Patent Application No. PCT/EP 00/08129. Documents A1, A2, A5, A12, A13, A16, A17, A18, A19, A20, and A21 were classified as "X" material to the patentability of the searched invention on the International Search Report, a copy of which is enclosed. Documents A6 and A7 are in the French language. Document A7 is the European counterpart of Document A3, according to the International Search Report, and thus provides the English language translation. An English language abstract of Document A6 is enclosed, we do not have an English translation of Document A6 at the present time, and the corresponding Australian patent application is not presently available in English.

Document A4 listed on the attached Form PTO-1449 is the published PCT application corresponding to the present U.S. patent application, for which the benefit of priority is claimed and disclosures thereof incorporated by reference. A copy of the first page of document A4 is provided herewith. A copy of the priority document is already of record.

Document A10 discloses periodate-sensitive immunological cross-reactivity between keyhole limpet haemocyanin (KLH) and serodiagnostic schistosoma mansoni egg antigens.

Document A11 discloses sequence of the octopus dofleini hemocyanin subunit: structural and evolutionary implications.

Document A12 discloses primary structure and unusual carbohydrate moiety of functional unit 2-c of keyhole limpet hemocyanin (KLH).

Document A13 discloses keyhole limpet hemocyanin Type 2 (KLH2): detection and immunolocalization of a labile functional unit *h*.

Document A14 discloses immunoelectron microscopy of hemocyanin from the keyhole limpet (*Megathura Crenulata*): a parallel subunit model.

Document A15 discloses cocaine vaccines: antibody protection against relapse in a rat model.

Document A16 discloses mass determination, subunit organization and control of oligomerization states of keyhole limpet hemocyanin (KLH).

Document A17 discloses suppression of psychoactive effects of cocaine by active immunization.

Document A18 discloses the sequence of a gastropod hemocyanin (HtH1 from *Haliotis Tuberculata*).

Document A19 discloses subunit organization of the abalone haliotis tuberculata hemocyanin type 2 (HtH2). and the cDNA sequence encoding its functional units d, e, f, g and h.

Document A20 discloses keyhole limpet hemocyanin: structural and functional characterization of two different subunits and multimers.

Document A21 discloses abalone (haliotis tuberculata) hemocyanin type 1 (HtH1) organization of the 400 kDa subunit and amino acid sequence of its functional units f, g and h.

Document A22 discloses a keyhole limpet haemocyanin (KLH): purification of intact KLH1 through selective dissociation of KLH2.

Document A23 discloses a quaternary structure, subunits and domain patterns of two discrete forms of keyhole limpet hemocyanin: KLH1 and KLH2.

Document A24 discloses complete amino-acid sequence of a functional unit from a molluscan hemocyanin (*Helix Pomatia*).

Documents for which the supplied date of publication lists the year of publication without the month were published sufficiently earlier than the effective U.S. filing date and any foreign priority date, so that the particular month of publication is not in issue. Pursuant to §609 of the MPEP, it is understood that the month of publication is not required when the particular month of publication is not in issue. Where no date is supplied, it is believed that the date of publication is not in issue.

No inferences should be drawn that the attached list represents a comprehensive investigation, or that any material disclosed is equivalent to the subject invention. In addition, none of the documents that have publication dates prior to the priority date of the above application anticipate the invention in this application.

The cited documents disclose numerous specific features. There has been no attempt to list each and every feature disclosed by each document. The Examiner is requested to review the documents and determine the extent of the materiality of the document disclosures with respect to the present invention.

Serial No: 10/049,988
Jürgen MARKL, et al.

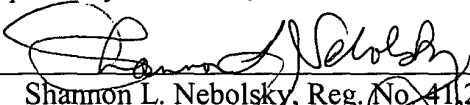
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Also, there is reserved the right to later set forth how the instant invention is distinguished over the disclosure of any document or other art, including the disclosures of the art and documents recited herein, that may be cited by the Examiner in rejecting a claim in the instant patent application. The recitation herein of the art and documents is not to be construed as an assertion that more pertinent art could not possibly be in existence.

No fee or petition is believed to be necessary. However, should any fee be needed, please charge our Deposit Account No. 23-0920, and deem this paper to be the required petition.

Respectfully submitted,

By 
Shannon L. Nebolsky, Reg. No. 41,217

Enclosures:

Form PTO-1449
One Bound Volume of Art A1-A24
International Search Report
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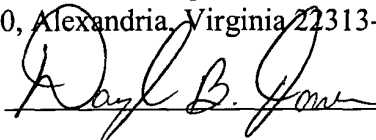
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				Application Number	10/049,988
				Filing Date	August 21, 2000
				First Named Inventor	Jürgen MARKL, et al.
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	1	of	2	Attorney Docket Number	GKS 102.0 US (7911/86349)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number - Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	5,888,775	03/30/1999	Tal, et al.	
	A2	5,831,033	11/03/1998	Zetter, et al.	
	A3	5,021,560	06/04/1991	Montreuil et al	

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)					
	A4	WO 00/55192		09/21/2000	Biosyn Arzneimittel GMBH		
	A5	WO 94/11019		05/26/1994	Zonagen, Inc.		
	A6	EP-0 244 295 A1		11/04/1987	Institut Pasteur		X
	A7	EP-0 252 829 A1		01/13/1999	Institut Pasteur		X
	A8	EP 0 621 039 A1		10/26/1994	Akzo Nobel N.V.		

OTHER ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	A9	LIEB et al., "Structures of two molluscan hemocyanin genes: Significance for gene evolution", <i>PNAS</i> 98(8):4546-4551 (04/2001)		
	A10	HAMILTON, et al., "Periodate-Sensitive Immunological Cross-Reactivity Between Keyhole Limpet Haemocyanin (KLH) and Serodiagnostic <i>Schistosoma Mansonii</i> Egg Antigens," <i>Parasitology</i> , 118:83-89 (01/1999)		
	A11	MILLER, et al., "Sequence of the <i>Octopus Dofleini</i> Hemocyanin Subunit: Structural and Evolutionary Implications," <i>J. Mol. Biol.</i> 278:827-842 (01/1998)		
	A12	STOEVA, et al., "Primary Structure and Unusual Carbohydrate Moiety of Functional Unit 2-c of Keyhole Limpet Hemocyanin (KLH)," <i>Biochimica et Biophysica Acta</i> , 1435:94-109 (09/1999)		
	A13	GEBAUER, et al., "Keyhole Limpet Hemocyanin Type 2 (KLH2): Detection and Immunolocalization of a Labile Functional Unit h, <i>Journal of Structural Biology</i> 128:280-286 (10/1999)		
	A14	HARRIS, et al., "Immunoelectron Microscopy of Hemocyanin from the Keyhole Limpet (<i>Megathura Crenulata</i>): A Parallel Subunit Model," <i>Journal of Structural Biology</i> , 111:96-104 (11/1993)		

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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				First Named Inventor	Jürgen MARKL, et al.
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	2	of	2	Attorney Docket Number	GKS 102.0 US (7911/86349)

A15	CARRERA, et al., "Cocaine Vaccines: Antibody Protection Against Relapse in a Rat Model," <i>Proc. Natl. Acad. Sci. USA</i> , 97(11) :6202-6206 (05/23/2000)	
A16	SÖHNGEN, et al., "Mass Determination, Subunit Organization and Control of Oligomerization States of Keyhole Limpet Hemocyanin (KLH)," <i>Eur. J. Biochem.</i> , 248 :602-624 (05/1997)	
A17	CARRERA, et al., "Suppression of Psychoactive Effects of Cocaine by Active Immunization," <i>Nature</i> , 378 :727-730 (12/14/1995)	
A18	LIEB, et al., "The Sequence of a Gastropod Hemocyanin (HtH1 from <i>Haliothis tuberculata</i>), <i>Journal of Biological Chemistry</i> , 275(8) :5675-5681 (02/25/2000)	
A19	LIEB, et al., "Subunit Organization of the Abalone <i>Haliothis tuberculata</i> Hemocyanin Type 2 (HtH2), and the cDNA Sequence Encoding its Functional Units d, e, f, g and h," <i>Eur. J. Biochem.</i> 265 :134-144 (07/1999)	
A20	SWERDLOW, et al., "Keyhole Limpet Hemocyanin: Structural and Functional Characterization of Two Different Subunits and Multimers," <i>Comp. Biochem. Physiol.</i> 113B (3) :537-548 (1996)	
A21	KELLER, et al., "Abalone (<i>Haliothis tuberculata</i>) Hemocyanin Type 1 (HtH1): Organization of the 400 kDa Subunit, and Amino Acid Sequence of its Functional Units f, g and h," <i>Eur. J. Biochem.</i> 264 :27-39 (05/1999)	
A22	HARRIS, et al., "Keyhole Limpet Haemocyanin (KLH): Purification of Intact KLH1 Through Selective Dissociation of KLH2," <i>Micron</i> , 26(3) :201-212 (02/1995)	
A23	GEBAUER, et al., "Quaternary Structure, Subunits and Domain Patterns of Two Discrete Forms of Keyhole Limpet Hemocyanin: KLH1 and KLH2," <i>Zoology</i> 98 :51-68 (02/1994)	
A24	DREXEL, et al., "Complete Amino-Acid Sequence of a Functional Unit from a Molluscan Hemocyanin (<i>Helix pomatia</i>)," <i>Biol. Chem. Hoppe-Seyler</i> 368 :617-635 (06/1987)	

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